

plants suggest that the disease is peach yellows which is a new record to India.

Further investigations on the etiology of pathogen and its natural spread in this region are in progress. This also is apparently the first occurrence of this disease outside U.S.A. and Canada. However, its origin in India needs to be ascertained.

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DIOSGENIN AND PHYTOSTEROLS FROM *LYCIUM BARBARIUM* LINN.

M. L. HARSH AND T. N. NAG

Post-Graduate Department of Botany
Government Dungl College, Bikaner 334 001, India

DIOSGENIN, β -sitosterol and lanosterol have been isolated from the flowers of *L. barbarum* for the first time and identified by TLC, mp, and IR spectral studies.

Diosgenin, a major raw material for commercial steroid production, occurs in quite a few species of family Solanaceae¹⁻⁸ but so far there is no report on the isolation of diosgenin and phytosterols from *L. barbarum* (fam. Solanaceae) growing in arid zone of Rajasthan although sterol compositions⁹, amino acids¹⁰, and seed oils¹¹ have been reported from *L. chinese*. This prompted the present investigation on the production of diosgenin, β -sitosterol and lanosterol in *L. barbarum* species.

Flowers of *L. barbarum* were collected from Devi Kund Sagar, Bikaner, dried and the powdered sample was refluxed with 30% HCl for 4 hr and filtered. The hydrolysed tissue sample was washed with cold distilled water, dried and extracted¹² with benzene for 24 hr. The extract was concentrated *in vacuo* and finally taken up in chloroform.

The chloroform extract along with reference compounds was applied on activated silica gel G plates,

developed and sprayed¹³ to detect the steroidal compounds. UV light was used to mark various steroidal compounds on unsprayed plates. The marked bands along with silica gel were collected, reconstituted in chloroform, dried under reduced pressure, crystallized and weighed separately.

Each of the isolated crystallized compounds was subjected to m.p. and I.R. (Perkin Elmer 337 Grating Infrared Spectrophotometer) spectral studies along with standard reference diosgenin, β -sitosterol and lanosterol.

Diosgenin (Rf. 0.43, brown), β -sitosterol (Rf. 0.49, purple) and lanosterol (Rf. 0.59, light brown) were confirmed by their m.p. (201-203°, 139-140° and 141-142°) and superimposable I.R. spectra of the isolated and the authentic samples of diosgenin, β -sitosterol and lanosterol.

Amount of diosgenin, β -sitosterol and lanosterol in the flowers of *L. barbarum* was 0.73%, 1.02% and 0.82% respectively.

The present investigation has shown that *L. barbarum* is good and potential source of diosgenin.

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